

AMENDMENTS TO THE CLAIMS

The listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-15 (cancelled).

Claim 16 (previously presented). A method of packaging integrated circuits comprising:  
attaching a first integrated circuit to a first face of a substrate with electrical connection between corresponding contacts of the substrate and the first integrated circuit;

attaching a second integrated circuit to a second face of the substrate with electrical connection between electrical contacts of the substrate and the second integrated circuit; and

encasing the first and second integrated circuits in resin.

Claim 17 (previously presented). A method according to claim 16 wherein the substrate includes holes extending between the first face and the second face, the encasing step includes applying the resin to a first side of the substrate and flowing the resin through the holes to the second side of the substrate, whereby the resin forms a single resin body encasing both of the integrated circuits.

Claim 18 (previously presented). A method according to claim 17 further comprising, before said encasing step, attaching a box to the second side of the substrate defining a volume for receiving the resin.

Claim 19 (previously presented). A method according to claim 18 wherein the box includes openings defining exit paths for gas within the box.

Claim 20 (previously presented). A method according to claim 16, wherein the encasing step comprises a molding operation performed at a pressure of less than one atmosphere.

Claim 21 (previously presented). A method according to claim 16 wherein the substrate is laminar and at least the first face includes solder balls, the encasing step includes forming the resin on the first face such that the resin on the first face has a maximum distance from a plane of said substrate which is smaller than a maximum extension of the solder balls from the plane of the substrate.

Claim 22 (previously presented). A method according to claim 21 wherein the solder balls are arranged in an array having a region without solder balls, and further comprising locating the first integrated circuit in said region.

Claim 23 (previously presented). A method according to claim 22, wherein at least one of the first and second integrated circuits comprises a flip chip.

Claim 24 (previously presented). A method according to claim 23, wherein the first integrated circuit comprises a flip chip.

Claim 25 (previously presented). A method according to claim 24, wherein the flip chip is located in a recessed portion of the substrate.

Claim 26 (previously presented). A method according to claim 24, wherein the electrical contacts of at least one of the first and second integrated circuits are connected to electric contacts on the substrate by wire bonding.

Claim 27 (currently amended). A substrate, comprising:

a plurality of first contacts and a first face configured to attach to a first integrated circuit with electrical connection between the first contacts and the first integrated circuit;

a plurality of second contacts and a second face configured to attach to a second integrated circuit with electrical connection between the second contacts and the second integrated circuit;

wherein the substrate defines a plurality of holes extending between the first face and the second face, the plurality of holes defining voids configured to pass a resin through the substrate, the substrate is laminar, and at least one of the faces includes solder balls.

Claim 28 (previously presented). The substrate of claim 27, wherein the solder balls are arranged in an array having a region without solder balls, and wherein said region is configured to receive the first integrated circuit.

Claim 29 (previously presented). An integrated circuit package comprising a substrate including electrical contacts and integrated circuits attached to opposite sides of the substrate, the electrical contacts electrically connected to corresponding electrical contacts on the substrate, each of the integrated circuits being encased in resin.

Claim 30 (previously presented). An integrated circuit package according to claim 29 wherein a single resin body encases both the integrated circuits and extends through holes in the substrate.

Claim 31 (previously presented). An integrated circuit package according to claim 29 wherein the electrical contacts of at least one of the integrated circuits are connected to the electrical contacts on the substrate by wire bonding.

Claim 32 (currently amended). An integrated circuit package according to claim 29 further comprising solder balls ~~are~~ arranged on at least a first side of the substrate.

Claim 33 (previously presented). An integrated circuit package according to claim 32 wherein the solder balls are arranged in an array having a region without solder balls, and wherein the first integrated circuit is located in said region.

Claim 34 (previously presented). An integrated circuit package according to claim 33, wherein at least one of the integrated circuits comprises a flip chip.

Claim 35 (previously presented). An integrated circuit package according to claim 34, wherein the flip chip is located in a recessed portion of the substrate.